
Association of Primate Veterinarians' Guidelines for Post Research Retirement of Nonhuman Primates

Purpose

The Association of Primate Veterinarians (APV) supports the responsible use of primates in biomedical research. Honoring the spirit of the 3Rs (1, 2), these guidelines focus on refinement to explore post research retirement of eligible primates. APV supports the careful evaluation of each animal to determine if retirement is appropriate. Depending on prior use of the animal, animal reuse/reassignment may be an option prior to a decision to retire a primate. The following guidelines aim to provide information to institutions, researchers, animal caregivers, veterinarians, and Institutional Animal Care and Use Committees (IACUC) on the practical aspects of post research retirement of primates.

Definition

Post research retirement is not a new concept; however, no specific guidelines or policies, and no distinctions regarding species, have been established. Select organizations have issued position statements or regulatory perspectives (4,5,6). Post research retirement of primates may also include the possibility of retirement in place rather than relocation to a retirement facility. Many research primates live in indoor/outdoor social groups that are comparable to housing at prospective retirement facilities.

Recommendations/Guidelines

Developing an institutional process

A defined institutional process for guiding the selection of primates for retirement is critical for consistency in implementation of a retirement program. Not all primates may be suitable for retirement. Even for nonterminal projects, other reasons may preclude considering an animal for retirement, such as ongoing health concerns, infection status or other research details. The institution should consider developing a formal policy and team or committee for selection of animals for retirement that includes institutional requirements and animal selection criteria. Careful consideration should be given to the appropriateness of retiring animals that were on infectious disease studies (e.g., SIV, Zika virus, viral hepatitis); animals with implanted devices (e.g., head implants, indwelling catheters, telemetry); animals with chronic clinical conditions or compromised immune systems, and geriatric animals. There may be animals in all of these conditions who are suitable for retirement but each candidate for transfer must be evaluated by a veterinarian to determine clinical suitability and a behavioral specialist to determine behavioral suitability. Researchers interested in post research retirement of primates should list it in their approved protocol as a planned end disposition for the animal(s).

Considerations for selection of potential retirement facilities

There are many factors to evaluate when considering a prospective retirement facility. Providing these facilities with a standard questionnaire can help to screen for basic suitability. At a minimum, important areas to evaluate include veterinary care, specific housing for animals (e.g., safety, space, indoor/outdoor access, social housing opportunities, etc.), behavioral management program, employee experience, regulatory oversight, facilities and security, biosecurity and prevention of disease transmission between caretakers and animals, strategic planning, finances, community outreach, and media relations. An example questionnaire is provided in Appendix A to facilitate evaluation of a prospective retirement facility.

A legal agreement between the donating and receiving facility is essential for transfer of ownership and management of liability. The legal agreement should include information about commitment to lifetime care; intended use of the animals; restrictions on breeding if relevant; clauses regarding future transfer of animals from the designated site; information on infectious diseases, if relevant; any specific expectations for handling of animals; and guidelines for media releases, future communications, and public relations. If funding is being provided to the receiving facility, the financial details should be outlined in the legal agreement. The legal agreement should also indicate conditions under which the receiving facility must contact the primary facility to provide specific information regarding the transferred animals. Agreements for donation of animals to retirement facilities should be reviewed by each institution and the donating facility should inform their IACUC.

Policies for transportation of animals should follow local, state, federal, and international guidelines of importation/exportation

For US domestic transport, regulations for USDA (3), and any specific state and local requirements must be followed. For international transport, USFWS and CITES regulations, if an endangered species, must be followed. The donating institution should have a SOP on local transport procedures and requirements.

Preparation of the animal

The preparation of animals for post research retirement consists of:

- a. Discontinuation of research procedures;
- b. Removal of implanted research devices; and
- c. Ensuring good physical and psychological health of animals.

There is no universal health surveillance strategy employed by retirement facilities. A discussion between the donating institution and the retirement facility should take place prior

to the transfer to determine any excluded agents. Once the donating institution has approved a transfer, the veterinarian should provide information on standard clinical parameters including age, weight, body condition score, TB status, and any required diagnostic testing. Additional relevant information should include behavioral assessment (trained behaviors, abnormal or fear-related behaviors), experience/suitability for social housing, typical style of interaction with humans, medical history disclosure, potential for complications related to research procedures, and any special considerations for transportation.

Preparing facility personnel and the research team for primate retirement

Post research retirement is generally well received, particularly where there is a significant enhancement of living conditions (e.g., larger housing), access to outdoor facilities, social housing, and/or opportunities to engage in certain species-specific behaviors (e.g., climbing) that may not have been available at the donating facility. Personnel often have a strong emotional bond with the primates they care for. It is important to generate a conversation at the institutional level and give all stakeholders an opportunity to express their concerns and/or support. Care staff should be notified about primates selected for post research retirement.

Benefits and risks

The prospect of retiring primates from a research facility brings multiple risks and benefits for the institution. When primate retirement is anticipated at or before study initiation, refinement of experimental procedures and endpoints for the study may be implemented during the study to facilitate future retirement. Institutions should also consider that these primates may not be entirely removed from research. Depending on the retirement facility and their policies, it may be possible to conduct noninvasive and behavioral studies on retired animals, for example, studies examining aspects of primate aging, management of obesity, impact of physical exercise on general health and reversibility of certain health conditions, social interactions, innovative housing and enrichment arrangements, and psychological aspects of resources provisioned.

There are a number of short and long-term risks for the donating institution and animal. Various diseases may be transmitted between animals and caregivers, at the receiving institution. More common infectious agents, such as *Shigella* spp., *Campylobacter* spp., and *Salmonella* spp., may be screened for during animal preparation for shipment to reduce the likelihood of transmission, but may still be a risk for recrudescence after shipment. Another potential risk with macaques is Macacine herpesvirus-1 ('Herpes B virus'), especially given the challenges of detection and latent seroconversion. "Herpes B virus" is zoonotic and could place personnel working at the retirement facility at risk. Examples of anthroozoonotic diseases that could affect retired primates include measles, tuberculosis, influenza, COVID-19, and other conditions. The risk of transmissible diseases emphasizes the importance of ensuring that a robust OHS program is available at the retirement facility, including a

program for use of personal protective equipment when cleaning enclosures or working closely with primates.

The donating institution should request references, examine publicly available information, such as the website, social media posts, and news articles/stories, and, ultimately, send staff for an in-person site visit. In some circumstances, it could be beneficial to have staff members from the prospective retirement facility visit the animals at the donating facility as well. The very nature of how most retirement facilities are funded creates risks for the donating institution. While the program may appear quite stable and financially viable upon initial inspection, the continued stability is paramount. Staffing changes can never be predicted and retirement facilities can go bankrupt and end up being sold to another owner with a different management philosophy. In conclusion, post research retirement of primates is a complex, multi-step process. To ensure its success all considerations must be carefully weighed before final decisions are made.

Acronyms

AAALAC – (formerly known as) Association for the Assessment and Accreditation of Laboratory Animal Care
APV – Association of Primate Veterinarians
ASA – American Sanctuary Association
AWA – Animal Welfare Act
AZA – Association of Zoos and Aquariums
CITES – Convention on International Trade of Endangered Species
GFAS – Global Federation of Animal Sanctuaries
IACUC – Institutional Animal Care and Use Committee
NAPSA – North American Primate Sanctuary Alliance
OHS – Occupational Health Services
PRR – Post Research Retirement
SIV – Simian Immunodeficiency Virus
SOP – Standard Operating Procedure
3Rs – Replacement, Reduction, Refinement
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service

References

1. Prescott MJ. 2006. Finding new homes for ex-laboratory and surplus zoo primates. *Laboratory Primate Newsletter* 45 (3):5-8.
2. Tannenbaum J and Bennett BT. 2015. Russell and Burch's 3Rs then and now: the need for clarity in definition and purpose. *J Am Assoc Lab Anim Sci* 54(2): 120-132. PMID: PMC4382615 PMID: 25836957.
3. AWA Regulations 9 CFR § 3.86-3.92.
4. OLAW Frequently Asked Questions. PHS Policy on Humane Care and Use of Laboratory Animals, F11. <https://olaw.nih.gov/guidance/faqs>.
5. Research dogs and cats adoption. AVMA Policies. <https://www.avma.org/resources-tools/avma-policies/research-dogs-and-cats-adoption>.
6. ACLAM Position Statement on Adoption of Research Animals. 2017. *J Am Assoc Lab Anim Sci* 56(6):807.